

AMENDMENTS TO THE CLAIMS:

1. (Amended) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population:

a manual compression test,

an apparent density test, and

~~an appearance test on each cancellous bone of said population of cancellous bone;~~

determining a compressive strength for each cancellous bone of said population of cancellous bone based on said at least two tests performed;

comparing said determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and

eliminating a subset of cancellous bone from said population of cancellous bone, which subset of cancellous bone fails to meet said predetermined compressive strength requirement.

2. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said manual compression test and said apparent density test are performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength.

3. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said manual compression test and said appearance test are performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength.

4. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said apparent density test and said appearance test are performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength.

5. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said manual compression test, said apparent density test and said appearance test are performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength.

6. (Cancelled).

7. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said manual compression test includes the steps of:

manually compressing each of said cancellous bones to make a subjective determination of said compressive strength of each of said cancellous bones; and

removing a cancellous bone from said population of cancellous bones when said

manually compressed cancellous bone appreciably deforms.

8. (Original) The method for evaluating the strength of cancellous bone according to claim 2, wherein said manual compression test includes the steps of:

manually compressing each of said cancellous bones to make a subjective determination of said compressive strength of each of said cancellous bones; and

removing a cancellous bone from said population of cancellous bones when said manually compressed cancellous bone appreciably deforms.

9. (Original) The method for evaluating the strength of cancellous bone according to claim 3, wherein said manual compression test includes the steps of:

manually compressing each of said cancellous bones to make a subjective determination of said compressive strength of each of said cancellous bones; and

removing a cancellous bone from said population of cancellous bones when said manually compressed cancellous bone appreciably deforms.

10. (Original) The method for evaluating the strength of cancellous bone according to claim 5, wherein said manual compression test includes the steps of:

manually compressing each of said cancellous bones to make a subjective determination of said compressive strength of each of said cancellous bones; and

removing a cancellous bone from said population of cancellous bones when said manually compressed cancellous bone appreciably deforms.

11. (Original) The method for evaluating the strength of cancellous bone according to claim 1, wherein said appearance test includes the steps of:

assessing a quality of each of said cancellous bones based on their individual appearance; and

assigning each of said cancellous bones with a grade which designates a subjective quality assessment of each of said cancellous bones.

12. (Original) The method for evaluating the strength of cancellous bone according to claim 3, wherein said appearance test includes the steps of:

assessing a quality of each of said cancellous bones based on their individual appearance; and

assigning each of said cancellous bones with a grade which designates a subjective quality assessment of each of said cancellous bones.

13. (Original) The method for evaluating the strength of cancellous bone according to claim 4, wherein said appearance test includes the steps of:

assessing a quality of each of said cancellous bones based on their individual appearance; and

assigning each of said cancellous bones with a grade which designates a subjective quality assessment of each of said cancellous bones.

14. (Original) The method for evaluating the strength of cancellous bone according to claim 5, wherein said appearance test includes the steps of:

assessing a quality of each of said cancellous bones based on their individual appearance; and

assigning each of said cancellous bones with a grade which designates a subjective quality assessment of each of said cancellous bones.

Claims 15-18 (Cancelled).

19. (New) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population, the tests being performed on each bone after the bone has been freeze dried:

a manual compression test,

an apparent density test, and

an appearance test;

determining a compressive strength for each cancellous bone of said population of cancellous bone based on said at least two tests performed;

comparing said determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and

eliminating a subset of cancellous bone from said population of cancellous bone,

which subset of cancellous bone fails to meet said predetermined compressive strength requirement.

20. (New) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population:

a manual compression test,

an apparent density test which includes the steps of:

cleaning each of said cancellous bones;

freeze drying each of said cancellous bones;

measuring the dimensions of each of said cancellous bones;

determining a volume of each of said cancellous bones from said  
measured dimensions;

weighing each of said cancellous bones;

determining an apparent density for each of said cancellous bones;

and

determining said compressive strength of each of said cancellous  
bones based on said apparent density; and

an appearance test;

determining a compressive strength for each cancellous bone of said population of  
cancellous bone based on said at least two tests performed;

comparing said determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and

eliminating a subset of cancellous bone from said population of cancellous bone, which subset of cancellous bone fails to meet said predetermined compressive strength requirement;

21. (New) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population:

a manual compression test,

an apparent density test which includes the steps of:

cleaning each of said cancellous bones;

freeze drying each of said cancellous bones;

measuring the dimensions of each of said cancellous bones;

determining a volume of each of said cancellous bones from said measured dimensions;

weighing each of said cancellous bones;

determining an apparent density for each of said cancellous bones;

and

determining said compressive strength of each of said cancellous bones based on said apparent density; and

an appearance test, said manual compression test and said apparent density test being performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength;

determining a compressive strength for each cancellous bone of said population of cancellous bone based on said at least two tests performed;

comparing said determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and

eliminating a subset of cancellous bone from said population of cancellous bone, which subset of cancellous bone fails to meet said predetermined compressive strength requirement;

22. (New) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population:

a manual compression test,

an apparent density test which includes the steps of:

cleaning each of said cancellous bones;

freeze drying each of said cancellous bones;

measuring the dimensions of each of said cancellous bones;

determining a volume of each of said cancellous bones from said



measured dimensions;  
weighing each of said cancellous bones;  
determining an apparent density for each of said cancellous bones;  
and  
determining said compressive strength of each of said cancellous bones based on said apparent density; and  
an appearance test, said apparent density test and said appearance test being performed on each cancellous bone of said population of cancellous bone in order to determine said compressive strength;  
determining a compressive strength for each cancellous bone of said population of cancellous bone based on said at least two tests performed;  
comparing said determined compressive strength of each cancellous bone against a predetermined compressive strength requirement; and  
eliminating a subset of cancellous bone from said population of cancellous bone, which subset of cancellous bone fails to meet said predetermined compressive strength requirement.

23. (New) A non-destructive method for evaluating the strength of cancellous bone, comprising the steps of:

providing a population of cancellous bone;

performing at least two of the following tests on each bone in the population:

a manual compression test,

an apparent density test which includes the steps of:

cleaning each of said cancellous bones;

freeze drying each of said cancellous bones;

measuring the dimensions of each of said cancellous bones;

determining a volume of each of said cancellous bones from said  
measured dimensions;

weighing each of said cancellous bones;

determining an apparent density for each of said cancellous bones;

and

determining said compressive strength of each of said cancellous  
bones based on said apparent density; and

an appearance test, said apparent density test and said appearance test  
being performed on each cancellous bone of said population of cancellous bone in order  
to determine said compressive strength;

determining a compressive strength for each cancellous bone of said population of  
cancellous bone based on said at least two tests performed;

comparing said determined compressive strength of each cancellous bone against  
a predetermined compressive strength requirement; and

eliminating a subset of cancellous bone from said population of cancellous bone,  
which subset of cancellous bone fails to meet said predetermined compressive strength  
requirement.